## ABSTRACT

Systems and methods are described for dynamically controlling operation of a rheometer. A program is created on a programming interface for executing a test upon a sample in a rheometer by receiving user selections of a plurality of nodes and connections of each node to another node according to directional connection indicators. Nodes indicate steps for performing a test upon a sample or configuring a rheometer for performing a test upon a sample. Scripts are created for generating a sequence of instructions to the rheometer. The scripts include instructions for performing steps indicated by each of the selected nodes and in accordance with the directional connection indicators. Low-level instructions are downloaded from the scripts for execution in the rheometer, and drivers in the rheometer are instructed for performing the downloaded instructions.